The La Plata Basin (LPB)
A CLIVAR/GEWEX Continental Scale Experiment

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Implementation Steering Group (ISG)

Intergovernmental Coordinating Committee of the La Plata Basin Countries - CIC

Framework Program Objective

To assist the governments of Argentina, Bolivia, Brazil, Paraguay and Uruguay in the integrated management of the water resources of the La Plata Basin in relation to variability and climate change effects, aiming at the economic development of the region with a sustainable environment

Countries:
Argentina, Bolivia, Brazil, Paraguay and Uruguay

Funds:
Global Environmental Facility (GEF) Funds

Implementation Agency:
United Nations Environment Programme - UNEP

Executing Agency:
Organization of American States - OAS

Local Executing Agency :
Intergovernmental Coordinating Committee of the La Plata Basin Countries - CIC

Membership:

Argentina:	3
Brazil:	7
Paraguay:	1
Uruguay:	2
US:	3
Ex-officio:	2

La Plata Basin (LPB) main science questions:

- What climatological and hydrological factors determine the frequency of occurrence and spatial extent of **floods and droughts**?

- How **predictable** is the regional weather and climate variability and its impact on hydrological, agricultural and social systems of the basin?

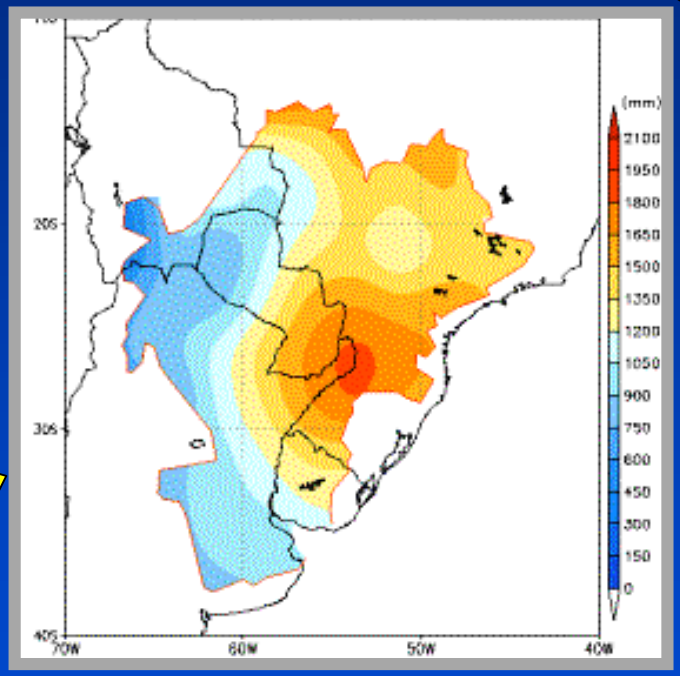
- What are the impacts of global **climate change and land use change** on regional weather, climate, hydrology and agriculture? Can their impacts be predicted, at least in part?

La Plata Basin (LPB) science plan available at:
www.atmos.umd.edu/~berbery/lpb

La Plata Basin Priority areas

Land surface effects

Extreme events



Variability and trends

SST Anomalies (Atl & Pac)

Climate change scenarios

Hydro-climate Prediction

Main research areas

* Improvement of models' representation of land surface-atmosphere interactions
* Land surface contributions to predictability
* Develop coupled models at adequate resolutions for hydrologic purposes
* Better estimates of MCS precipitation
* Climate change scenarios
* Impacts on the system's hydrology

Status of Implementation Plan

PART A: The International Program on the La Plata Basin (LPB)

PART B: Current status of research and applications (obs, atmos and hydro modeling)

PART C: Implementation of LPB CSE

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Data rescue efforts

Hydroclimatic monitoring activities

- *A supersite*
- *In-situ soil moisture measurements*
- *Flux Towers*
- *Satellite information*

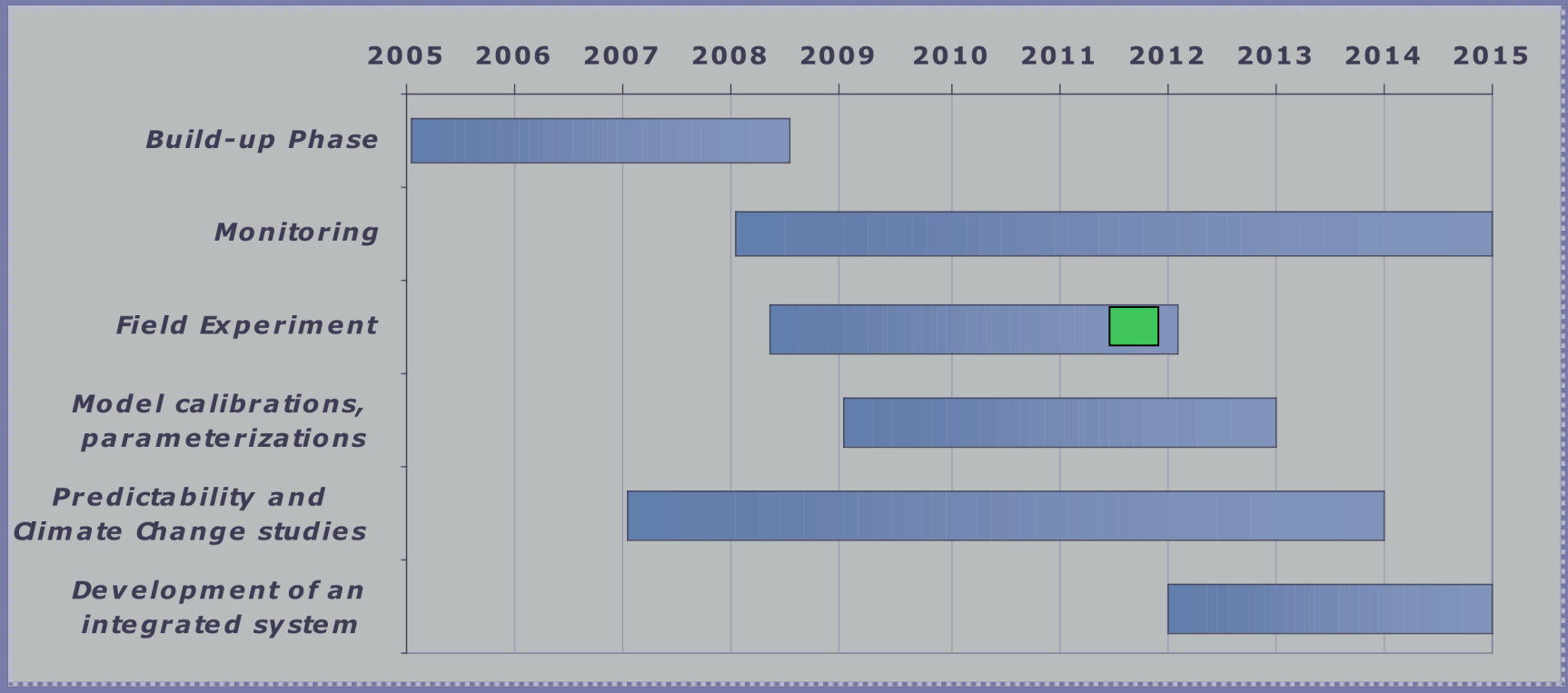
Field Experiment (PLATEX)

Modeling activities

Predictability and climate change assessments

- *Land cover/Land use*
- *Climate change scenarios and regional downscaling*

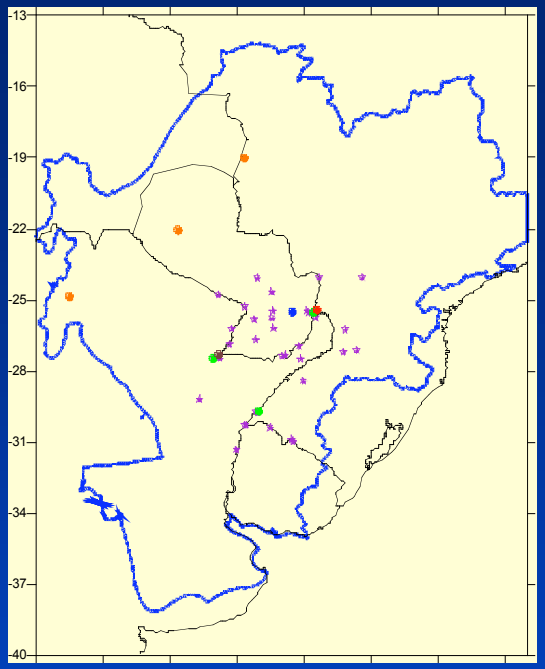
LPB Timeline (2005-2015)



Scientific Motivations for the LPB Continental Scale Experiment

- Strong interannual and interdecadal climate and streamflow variations and trends
- Confounding effects of land use change: deforestation, intensive agriculture trends and urbanization
- Unknown effect of aerosols advection from biomas burning from tropical areas
- Strong role of Mesoscale Convective Systems in total precipitation
- Potential for better predictability
- Climate change vulnerability

Working on establishing a supersite



Raingauge Meso-network
Soil moisture measurements
Radar
Flux Tower
Aerosols
Rawindsonde
Wind profiler
Lightining detection

EOL/UCAR Facilities
Field experiment only

ISFF: Flux Towers/Soil Moisture
SPOL: Radar *[one option is to propose upgrades to local radars, as was done during NAME]*
ISS: Radiosondes/Profiler
RAF: Aircraft (Soil moisture? Aerosols?)
Lidar

A planning meeting is expected to take place sometime in April 2008 in Boulder, Colorado.

Useful URLs

-http://www.eol.ucar.edu/projects/lpb

-http://www.cicplata.org

-http://www.cptec.inpe.br/lpb

-http://www.atmos.umd.edu/~berbery/lpb